



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

A silicate of soda was formed by fusing together silica and carbonate of soda, in proportions indicated by the previous experiments—*i. e.* 23 silica to 54 carbonate of soda = 31 soda. The fused mass was crystallized. It was dissolved in water, and the solution evaporated *in vacuo* yielded a crystallized salt, which contained about 5 per cent. of carbonate of soda; when this, calculated as the ordinary 10-hydrated salt, was subtracted, the silicate agreed nearly with the formula  $\text{NaO} \cdot \text{SiO}_2 + 7\text{HO}$ . A crystallized salt of like composition was obtained when hydrated silica was dissolved in a solution of caustic soda, the silica and soda being in the same proportions, *i. e.* 31 : 23. In these experiments it appears, therefore, that in the process of solution and crystallization a portion of soda is extruded. When exposed to a temperature of about 300° F., nearly all the water was driven off from these salts, less than 1 per cent. remaining.

The fused silicate of lithia in like manner, when treated with water, appeared to split up into different compounds.

After guarding himself from drawing any decided inference from the experiments recorded, the author concludes by observing that at present he can see no alternative but to admit of more than one equivalent for silicic acid (that is to say of more than one acid), the value of which is determined by circumstances,—such as the presence of water and the nature of the base to which it is presented. The existence of such different silicic acids has been already suggested by chemists on different grounds, particularly by Ebelman and Laurent, and lately by M. Fremy.

II. Appendix to the Paper of Mr. W. H. BARLOW, “On an Element of Strength in Beams subjected to Transverse Strain,” &c. By PETER BARLOW, Esq., F.R.S. Received March 25, 1857.

A notice of this communication is given in the abstract of the paper to which it refers (see *antea*, p. 432).